University of Toronto

P78-0506.(27)
U18.1

COMPUTER SCIENCE NEWSLETTER

No. 95

Edited by C. Alan Ford

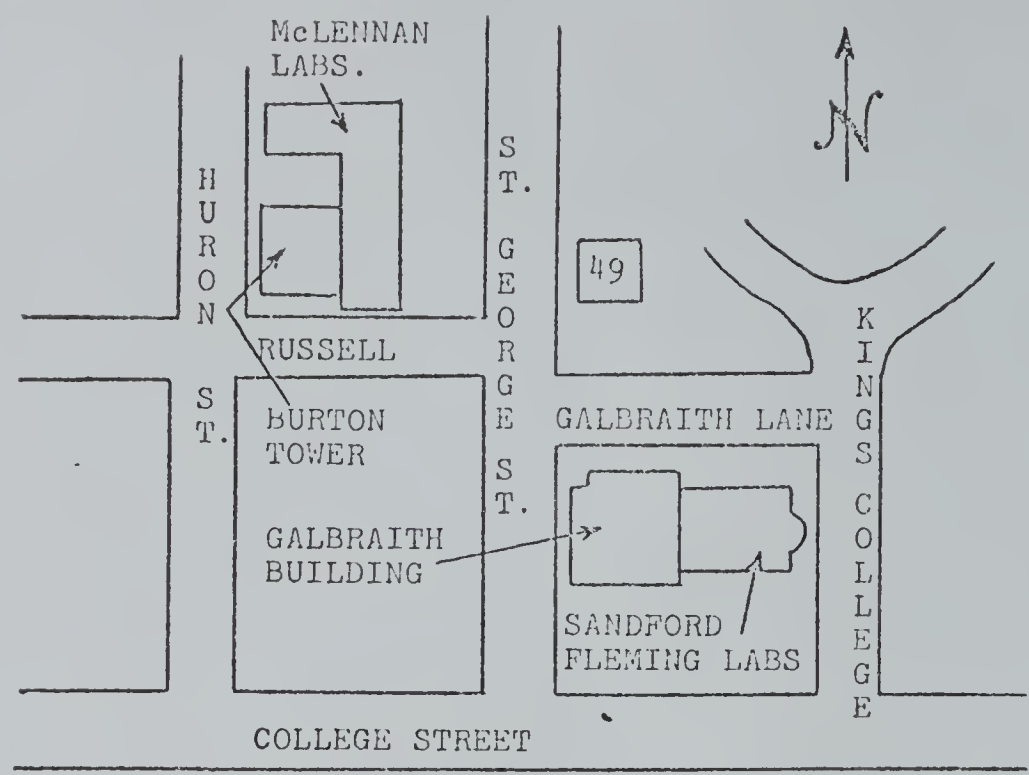
Date December 29, 1972

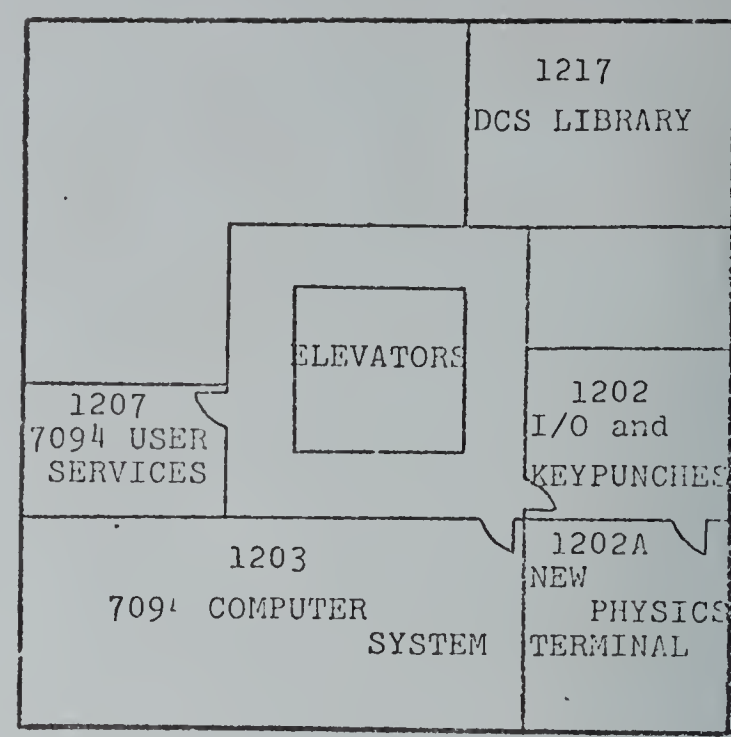
GENERAL NEWS — Page
Happy New Year..... 1
The 4th Ontario Universities Computing Conference..... 1
USERBOOK..... 2
CDC CYBER-73 At The University Of Western Ontario..... 2
Call For Papers..... 3
Personnel Changes..... 3
Department Of Computer Science News..... 4
Recent Acquisitions In The DCS Library..... 6

SYSTEM/370 SERVICES
System/370 Activity Level..... 9
System/370 Reliability..... 12
Credit Requests..... 15
More Statistics On November High Speed Processing..... 16
System Status Bulletins Issued..... 17
Updates Issued For Userbook Section 3..... 17

INTERACTIVE TERMINAL SYSTEMS
Interactive Systems Reliability..... 18
USERBOOK Section 4..... 19
Usage Graphs..... 20

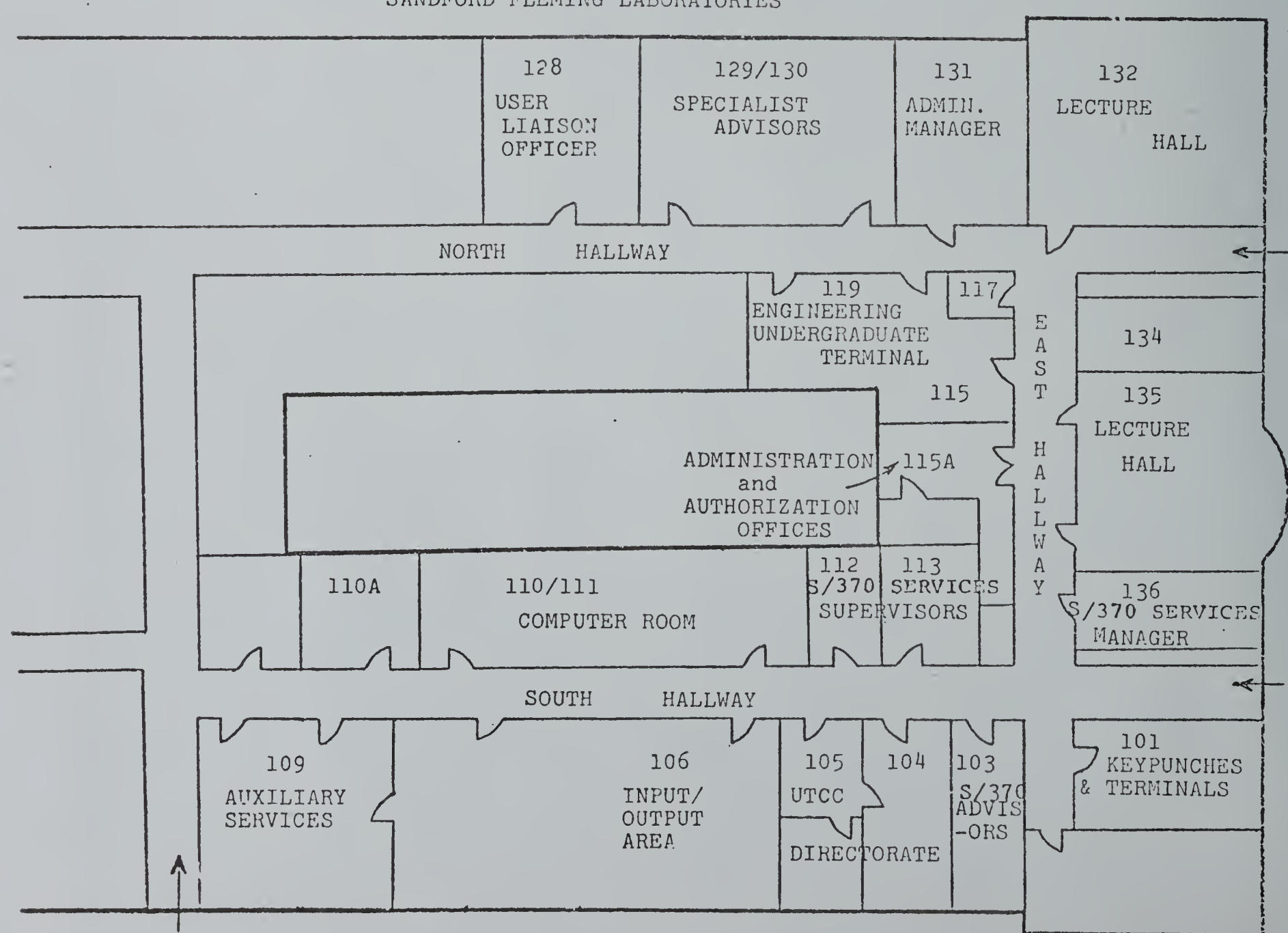
COMPUTER RESEARCH FACILITY
General News..... 23





FLOOR PLAN: 12th FLOOR BURTON TOWER

FLOOR PLAN: UNIVERSITY OF TORONTO COMPUTER CENTRE
SANDFORD FLEMING LABORATORIES



HAPPY NEW YEAR!!!

C. A. Ford

The staff of the Computer Centre extends Season's Greetings to the many users of our facility. A good year, 1972! Here's to 1973!

The System/370-165, new last January, has handled the ever-increasing workload with ease. The 7094, revivified by its near-dedication to a group of special users, has performed effectively. ATS, on the Interactive/360, has become more popular throughout campus for text-editing and APL is acquiring more addicts at a steady rate. One hundred and ten terminals have been placed into service by Interactive Systems to the present moment.

The entire UTCC staff will endeavour to improve still more the excellence of our services to the university community in 1973. We look to you, our users, for guidance concerning your requirements. Meeting your needs is our goal. Please keep us advised.

Our best wishes for a useful, productive and happy year.

THE 4TH ONTARIO UNIVERSITIES COMPUTING CONFERENCE

This conference will be held at the Inn On The Park in Toronto on February 22 - 23, 1973. The conference theme is: Computing Tomorrow: The Influence of the Computer on the University Environment.

For more information, inquiries may be directed to:

Mr. David S. Macey,
Office of Computer Coordination,
Council of Ontario Universities,
102 Bloor Street West,
Toronto M5S 1M8, Ontario.
Telephone: (416) 920-6865

USERBOOK

Section 4 of the USERBOOK is now available. See further details under the Interactive Terminal Systems section of this Newsletter.

Section 3 of the USERBOOK has been updated. The list of pages added or replaced to this section is to be found under the S/370 Services section of this Newsletter.

CDC CYBER-73 AT

THE UNIVERSITY OF WESTERN ONTARIO

J. Wettlaufer

In last month's newsletter terminal service to Western's Cyber-73 was announced. This machine is similar to the CDC6400 computer. It has 64K of 60-bit words, of which 48K are available for user problem programs. In addition to the central memory, there is 128K of ECS (Extended Core Storage), which can be used for temporary data storage by user programs.

Western's system is currently being run with the SCOPE3.3 operating system. The system has two FORTRAN compilers, one of which can be used for code optimizing. As a result of the long word length, single precision calculations retain about 14 significant decimal digits. Software simulation of double precision calculations is available with both FORTRAN compilers. An assembler language (COMPASS) and COBOL are also available. Some of the applications software that is available includes: SPSS, TSP, SSP, SORT/MERGE, BMD and SIMSCRIPT. With the exception of TSP (Time Series Processor) this software is already available on the IBM S/370-165 at UTCC.

Any user who feels Western's computing facilities satisfy a unique need should contact:

John Wettlaufer, S/370 User Services,
Room 130, Sandford Fleming Labs.,
University of Toronto Computer Centre.
(Telephone: 928-6355)

CALL FOR PAPERS

Papers are solicited for the Eleventh Annual Computer Personnel Research Conference, sponsored by the Association for Computing Machinery Special Interest Group for Computer Personnel Research. The conference will be held on June 22-23, 1973 at the University of Maryland Conference Center, College Park, Maryland.

All inquiries should be sent to the program chairman, Professor A.W. Stalnaker, College of Industrial Management, Georgia Institute of Technology, Atlanta, Georgia 30332, telephone (404) 894-2627.

PERSONNEL CHANGES

J. Schick

During the month of December there were more changes in the staff of the S/370 Services Group.

Derry Cox transferred from S/370 User Services on December 1, to take over the position of S/370 I/O Supervisor. Al Jones, S/370 Administrator, leaves the employ of the Computer Centre in January to take up a new position in computing with the banking industry. We wish him all the best.

The Centre has also lost the skills of Elvin Edwards and Brian Lucarelli, two operators in S/370 Services, and of Sandy Siba, the receptionist in Room 130.

John Wettlaufer, previously on our temporary staff, has been appointed to a full-time position in S/370 User Services.

Mary Turnquist of our software staff will be leaving early in January to return to the academic life and Terri Prescott, the secretary to the programming group, leaves at the end of December.

DEPARTMENT OF COMPUTER SCIENCE NEWS

C. Phillips

Christmas Party

Santa paid his annual visit to the Computer Science Department on December 2 this year. He didn't seem as plump as last year, but he was every bit as jolly and dispensed his presents with much good cheer.

The Social Committee did a super job. The decorations, the food and drink, and the evening's entertainment were enjoyed by all.

Merry Christmas and Happy New Year and classes start January 8.

Physical Science Saturdays

Dr. J. Evans, President of U of T, welcomed 1400 secondary school students on November 25 and December 2. The Departments of Astronomy, Chemistry, Computer Science, Mathematics, Physics, and the Faculty of Applied Science and Engineering were co-hosts and jointly responsible for the days' activities.

Many thanks from the Department to the following people for their time, ideas, and assistance, all of which made our events successful: Professors Ken Sevcik, Ron Baecker, Denis Tsichritzis; Computer Centre personnel Derry Cox, Ian Darwin, Stan Yagi, Rein Mikkor, and Sam Goldfarb; Computer Science students Mark Fox, Dave Kirsch, Dick Swenson, Larry Chan, Norm Badler, Gabe Gewurtz, and CSRG'er Tom Britton.

PhD's And Employment

Next year several Ph.D. students will be completing their studies. A booklet containing a short resume of each student has been prepared and can be obtained from Mrs. C. Phillips, Department of Computer Science, University of Toronto, 255 Huron St., Toronto. A similar compilation of graduating Master's students will be available the first of March.

Colloquia Speakers

The colloquia speakers this fall have been varied and interesting due in part to the efforts of Professor John Lipson who is "in charge" of colloquia. Anyone wishing to receive advance notification of the colloquia speakers should advise Miss Angie Blonski, Department of Computer Science, University of Toronto, 255 Huron St., Toronto.

Some of the Colloquia speakers this fall are given below:

"An Outline of Scott and Strachey's Approach to Programming Language Semantics"
Professor J.E. Stoy of the Oxford University Computing Laboratory.

"Computer Research at Bell-Northern"
Dr. Donald Chisholm, President of Bell-Northern Research.

"The Specification of Data Structures, Access Methods and Efficiency - Levels of Detail"
Professor J. Mullin of The University of Western Ontario.

"Promise of Optical Memories"
Dr. Jan A. Rajchman, Staff Vice-President, Information Sciences, RCA Laboratories, Princeton.

"Definitional Interpreters for Higher-Order Programming Languages"
Professor John Reynolds of Syracuse University.

"Experience in Developing Information Systems for Hospital Laboratories and Radiology Departments"
Professor Roman Weil of the Graduate School of Business, University of Chicago.

"Practically Impossible Decision Problems"
Professor Michael Rabin of the Hebrew University, Jerusalem.

"Why Some Combinatorial Problems are Hard"
Professor Albert Meyer of Project MAC, Massachusetts Institute of Technology.

RECENT ACQUISITIONS IN THE DCS LIBRARY

ACM SIGOPS Workshop on System Performance Evaluation,
Harvard University, 1971
System performance evaluation.
New York, ACM, 1971.

ACM Symposium on Theory of Computing, 4th, Denver, 1972.
Conference record.
New York, ACM, 1972.

Anselone, Philip M.
Collectively compact operator approximation
theory and applications to integral equations.
Englewood Cliffs, N.J., Prentice-Hall, 1971.

Arbib, M.A.
The metaphorical brain: an introduction to cybernetics
as artificial intelligence and brain theory.
New York, Wiley-Interscience, 1972.

Birkhoff, G.
The numerical solution of elliptic equations.
Philadelphia, SIAM, 1972.

Cardenas, A.F., Presser, L. and Marin, M.A., eds.
Computer science.
New York, Wiley-Interscience, 1972.

Conte, S.D. and de Boor, C.
Elementary numerical analysis: an algorithmic approach.
2d ed.
New York, McGraw-Hill, 1972.

Courant Computer Science Symposium, 2d, New York, 1970.
Formal semantics of programming languages, ed. by R. Rustin.
Englewood Cliffs, N.J., Prentice-Hall, 1972.

Courant Computer Science Symposium, 3d, New York, 1970.
Computer networks, ed. by R. Rustin.
Englewood Cliffs, N.J., Prentice-Hall, 1972.

Dreyfus, H.L.
What computers can't do; a critique of artificial reason.
New York, Harper & Row, 1972.

Gonzalez, R.F. and McMillan, C., Jr.
Machine computation: an algorithmic approach.
Homewood, Ill., Irwin, 1971.

Green, R. E., and Parslow, R.D., eds.
Computer graphics in management: case studies of industrial applications.
London, Gower Press, 1970.

Hawkes, N.
The computer revolution.
New York, E.P. Dutton, 1972.

Hayes, R.M. and Becker, J.
Handbook of data processing for libraries.
New York, Wiley, 1970.

Heaps, H.S.
An introduction to computer languages.
Englewood Cliffs, N.J., Prentice-Hall, 1972.

Jacoby, S.L.S., Kowalik, J.S. and Pizzo, J.T.
Interactive methods for nonlinear optimization problems.
Englewood Cliffs, N.J., Prentice-Hall, 1972.

Jahoda, G.
Information storage and retrieval systems for individual researchers.
New York, Wiley-Interscience, 1970.

Karbowiak, A.E. and Huey, R.M., eds.
Information, computers, machines and man: an introductory text to systems engineering.
Sydney, John Wiley & Sons Australasia, 1971.

Martin, J.T.
Systems analysis for data transmission.
Englewood Cliffs, N.J., Prentice-Hall, 1972.

Meadow, C.T.
Man-machine communication.
New York, Wiley-Interscience, 1970.

Newell, A. and Simon, H.A.
Human problem solving.
Englewood Cliffs, N.J., Prentice-Hall, 1972.

Sanderson, P.C.
Computer languages: a practical guide to the chief programming languages.
London, Newnes-Butterworths, 1970.

Sherr, S.
Fundamentals of display system design.
New York, Wiley-Interscience, 1970.

Tou, J.T., ed.
Applied automata theory.

SYSTEM/370 ACTIVITY LEVEL

C. A. Ford

The month of November has been one of peak loads on computer systems. The continuance of this tradition is shown in Figure I, General Purpose Job Volume for S/3X0, and in Figure II, High Speed Job Load.

The effectiveness of the System/370-165 and the operating systems is shown especially vividly by the growth in the general purpose service area.

While preparing this article a disagreement was discovered between data on file for the High Speed job volume. Monthly figures for November and December of 1971 were much higher than weekly records would have indicated. The monthly data were found to be in error. When corrected, we find that the HSJS load for November, 1971 was 135,904 jobs. The November 1972 load was 147,899 jobs, an increase of almost nine percent.

The constraint upon continued growth of work in this area is the availability of keypunches or more particularly the space in which to locate them. The actual computer system is quite capable of sustaining a higher total load.

The total of S/370 high speed and general purpose job volumes was 197,064, exceeding by 11% the record set in October, 1972 and by 25% the record of November, 1971.

Figures III(a) through (c) illustrate the ease with which the S/370 has met the recent demands for service. Figure III(a) shows OSF, the monthly average of service or priority requests, since July 1971. It is gratifying that the level continues to balance near the 100% mark. Figure III(b) shows the great increase in throughput rate, measured in jobs per hour of uptime. Figure III(c) shows that these have, since last March, been accomodated with very little variation in overall service factor. Runs left in the evening at PR=4 can be turned around by morning with considerable ease. Were there a heavy demand for non-prime service, the system as it stands could process over 300,000 general jobs per month.

GENERAL PURPOSE JOB STREAM

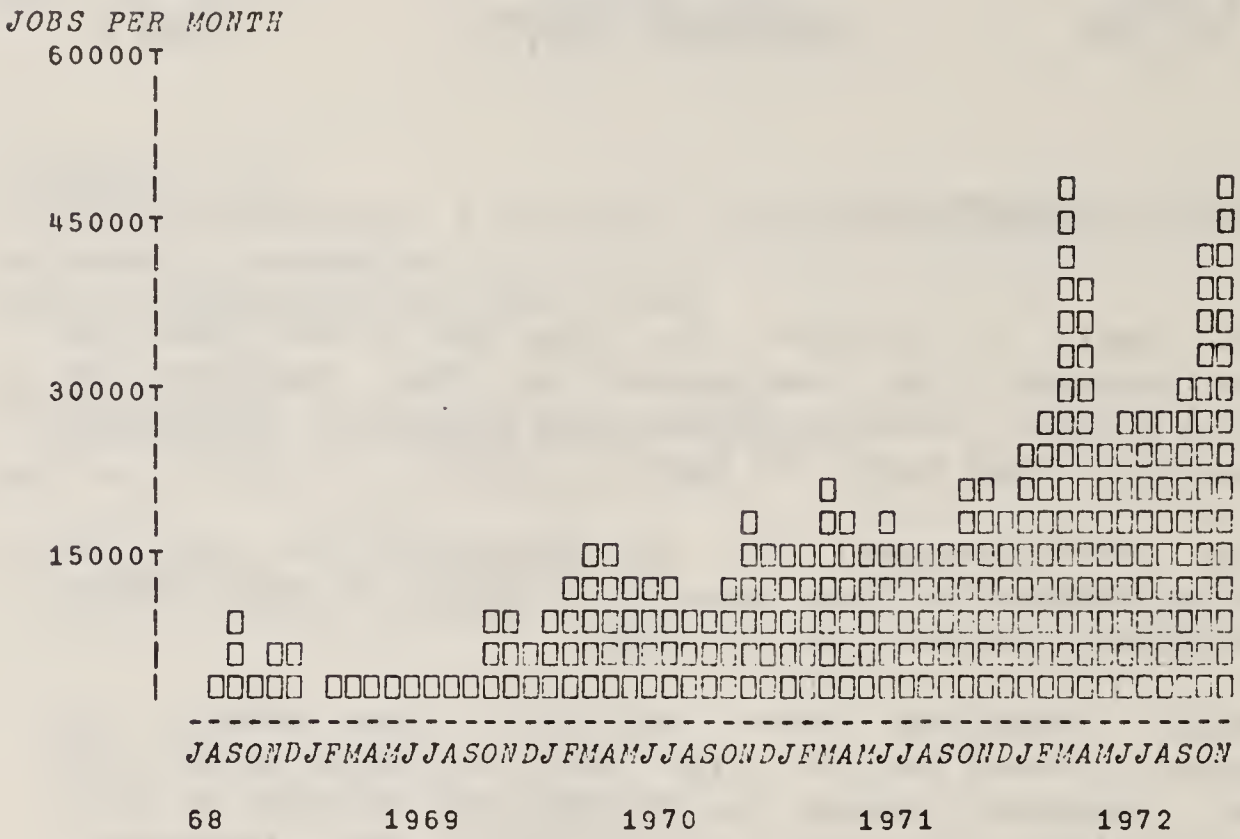


FIGURE I

HIGH SPEED JOB STREAM

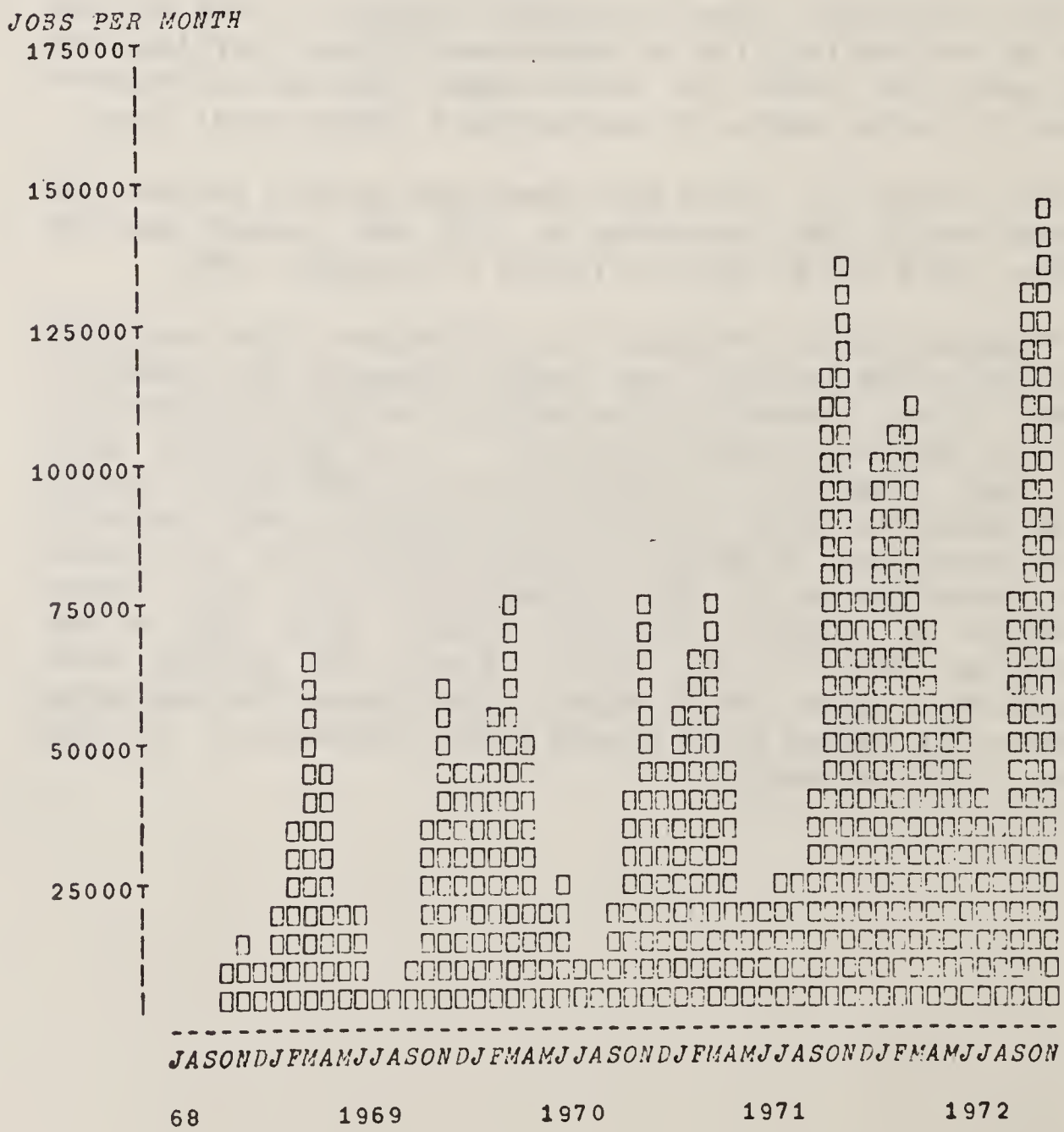


FIGURE II

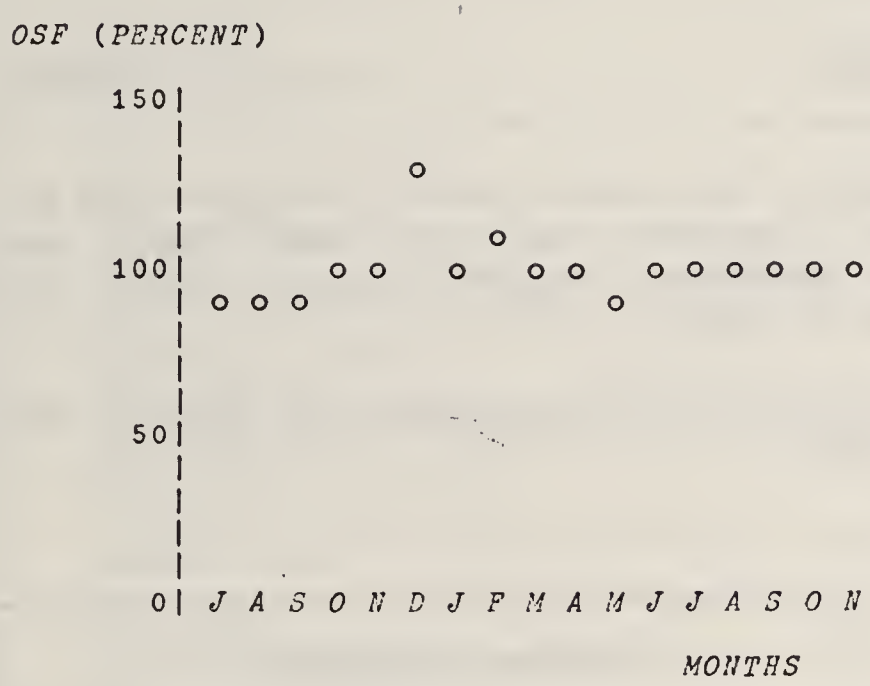


FIGURE III[A]

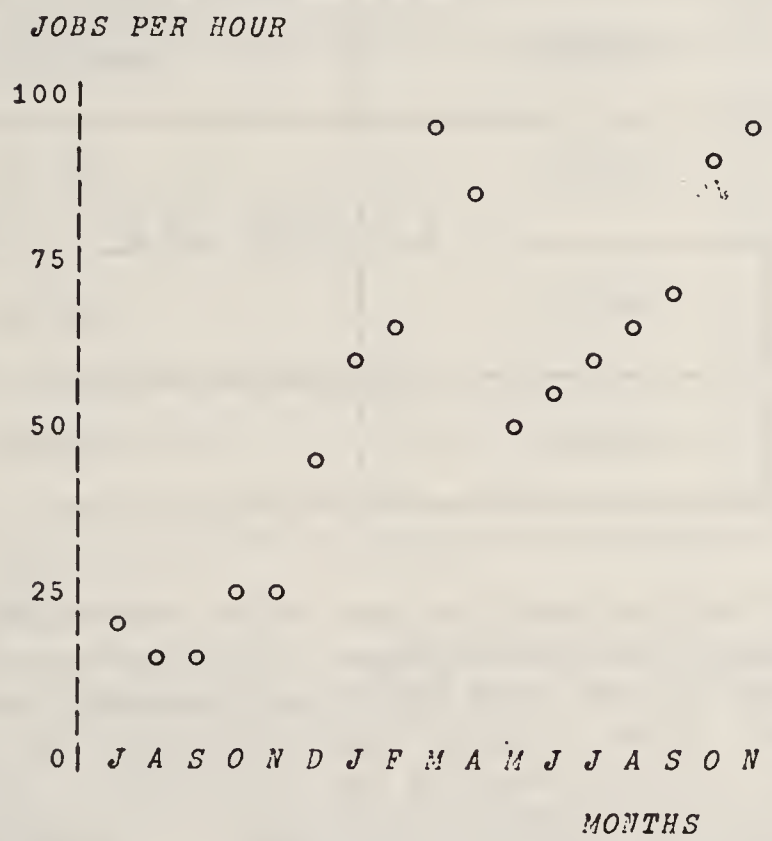


FIGURE III[B]

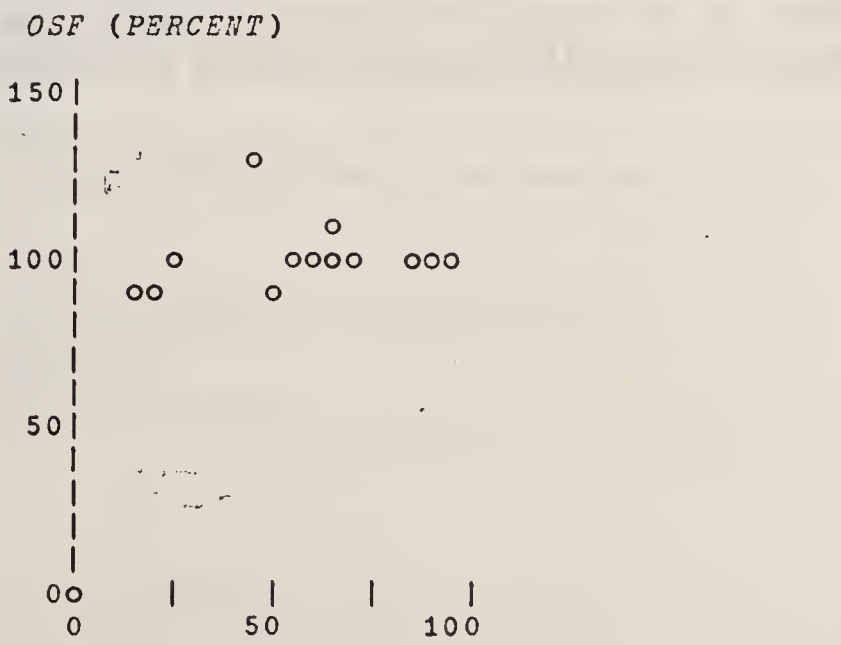


FIGURE III[C]

SYSTEM/370 RELIABILITY

J. Lees

System reliability has two aspects, good news and bad news. The bad news...downtime...we try to make short and infrequent. The Downtime Reports printed below are generated to help us do that.

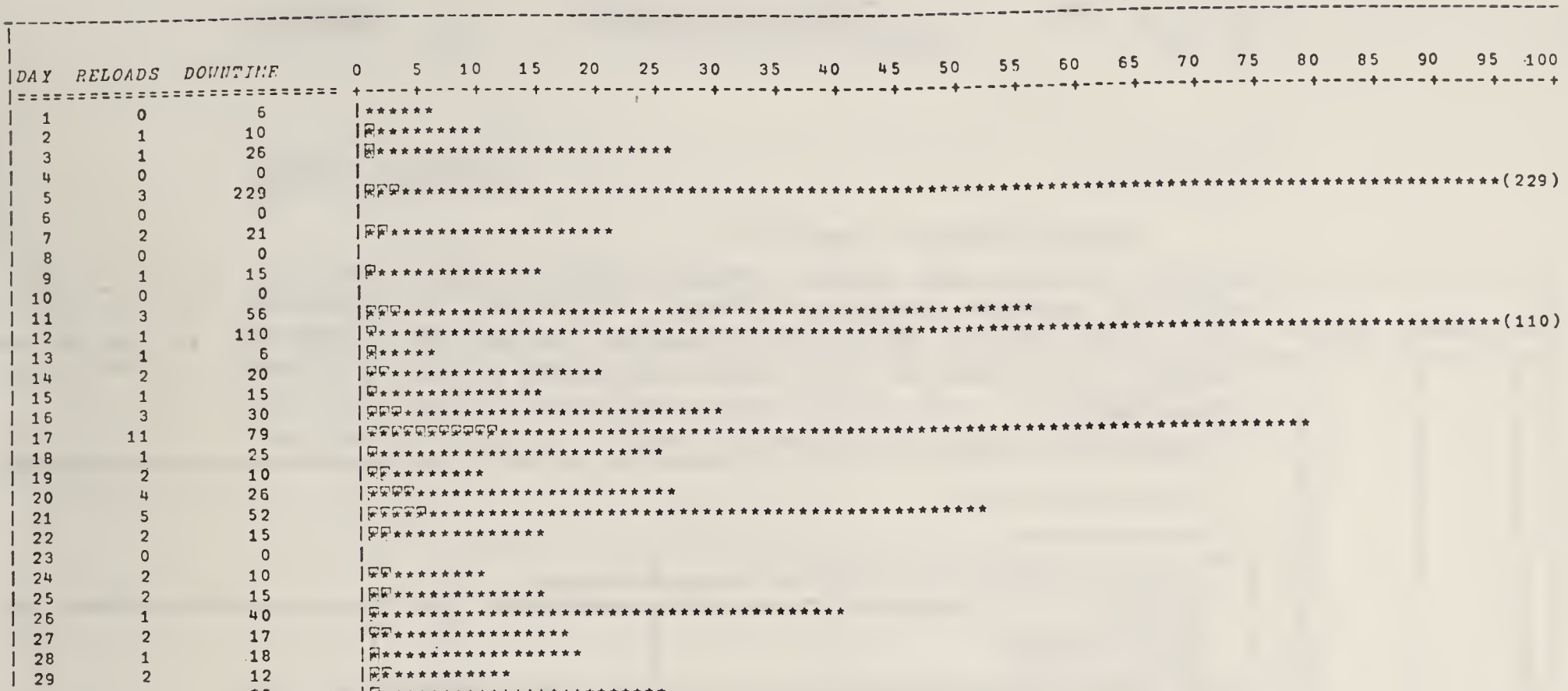
What we want users to enjoy is uptime, as shown in the table immediately below.

	UPTIME PERCENTAGE	
SERVICE	OCTOBER	NOVEMBER
S/370 GENERAL	96.8%	97.3%
CRJE	96.3%	97.1%
HSJS	94.1%	95.9%

The table shows that reliability was better in November. This was despite several serious outages. On November 5 a bad electronic circuit in the 2880 block multiplexer channel prevented the system from loading and resulted in 185 minutes of downtime. An I/O error on the EUT printer caused a further 65 minutes of downtime for HSJS. A hardware problem in the printer control unit caused 110 minutes of downtime on November 12 and repeated problems with the OS software on November 17 resulted in 65 minutes of downtime.

DOWNTIME REPORT ON CRJE FOR NOV '72

DAY	RELOADS	DOWNTIME
1	0	6
2	1	10
3	1	26
4	0	0
5	3	229
6	0	0
7	2	21
8	0	0
9	1	15
10	0	0
11	3	56
12	1	110
13	1	6
14	2	20
15	1	15
16	3	30
17	11	79
18	1	25
19	2	10
20	4	26
21	5	52
22	2	15
23	0	0
24	2	10
25	2	15
26	1	40
27	2	17
28	1	18
29	2	12
30	1	25

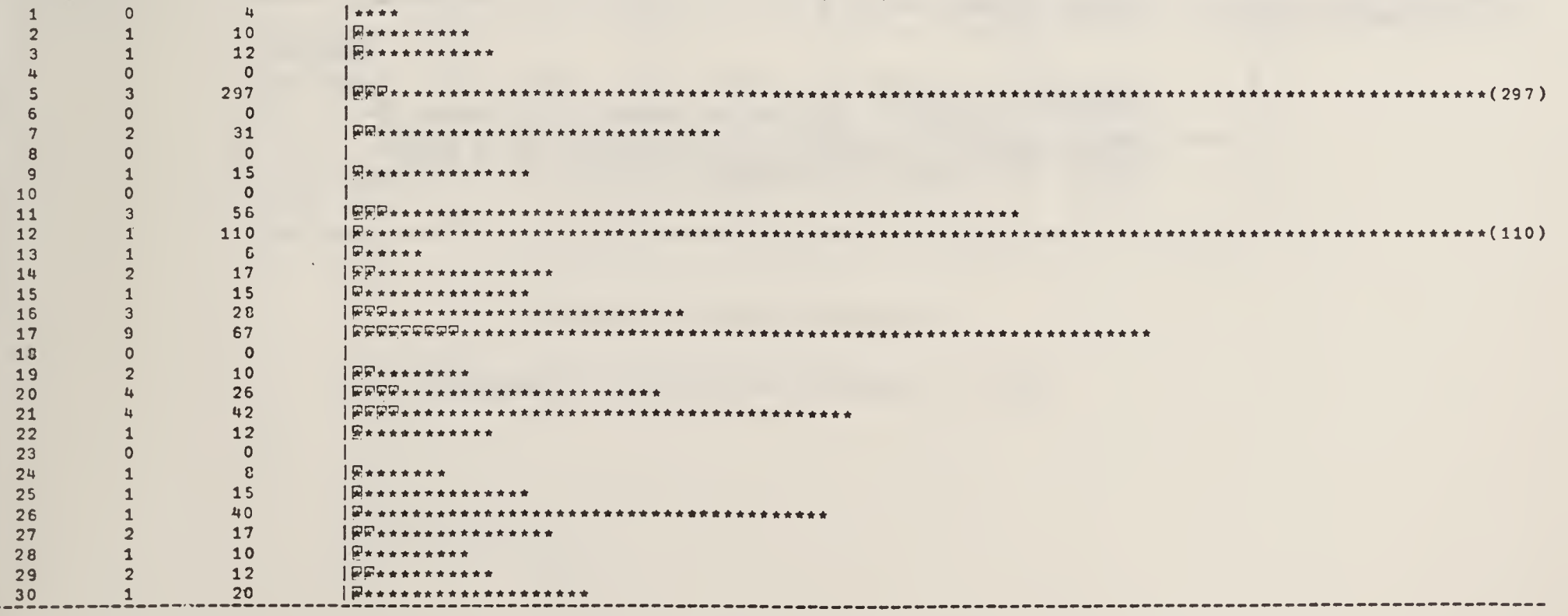


STATISTICS:

TOTAL TIME DOWN (MIN) ..... 888 *AVG. PER DAY* 29.6
TOTAL NUMBER OF RELOADS ... 55 *AVG. PER DAY* 1.8

DOWNTIME REPORT ON HSJS FOR NOV '72

DAY	RELOADS	DOWNTIME
1	0	4
2	1	10
3	1	12
4	0	0
5	3	297
6	0	0
7	2	31
8	0	0
9	1	15
10	0	0
11	3	56
12	1	110
13	1	6
14	2	17
15	1	15
16	3	28
17	9	67
18	0	0
19	2	10
20	4	26
21	4	42
22	1	12
23	0	0
24	1	8
25	1	15
26	1	40
27	2	17
28	1	10
29	2	12
30	1	20



STATISTICS:

TOTAL TIME DOWN (MIN) ..... 880 *AVG. PER DAY* 29.3
TOTAL NUMBER OF RELOADS ... 48 *AVG. PER DAY* 1.6

*DOWNTIMES (IN MINUTES) ARE SHOWN AS ASTERISYS E.G. **************

RELOADS REFERS TO THE NUMBER OF TIMES THE HIGH-SPEED-JOB-STREAM MONITOR HAD TO BE RE-STARTED AND ARE SHOWN AS RECTANGLES E.G. □□□□

DOWNTIME REPORT ON S370 FOR NOV '72

DAY	RELOADS	DOWNTIME	0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
1	0	4	****
2	1	10	■*********
3	1	11	■**********
4	0	0	
5	3	229	■■■**********(229)
6	0	0	
7	2	20	■■**********
8	0	0	
9	1	15	■**********
10	0	0	
11	3	56	■■■**********
12	1	110	■**********(110)
13	1	6	■******
14	1	17	■**********
15	1	15	■**********
16	2	28	■■**********
17	10	72	■■■■■■■■■■**********
18	1	5	■****
19	2	10	■■*********
20	4	26	■■■■**********
21	4	42	■■■■**********
22	1	10	■*********
23	0	0	
24	1	8	■********
25	1	15	■**********
26	1	40	■**********
27	2	17	■■**********
28	1	10	■*********
29	2	12	■■**********
30	2	30	■■**********

STATISTICS:

TOTAL TIME DOWN (MIN) ..... 818 *AVG. PER DAY* 27.3
TOTAL NUMBER OF RELOADS ... 49 *AVG. PER DAY* 1.6

DOWNTIMES (IN MINUTES) ARE SHOWN AS ASTERISYS E.G. **********

RELOADS REFERS TO THE NUMBER OF RE-IPL'S REQUIRED DUE TO SYSTEM FAILURES AND ARE SHOWN AS RECTANGLES E.G. □□□□

CREDIT REQUESTS C. A. Ford

The table which follows shows the credit request activity for the S/370 general purpose service for the months of September, October and November. A look back over the last twelve months has shown that we seem to be in a rut at 13 credit claims for every 10,000 jobs. We keep trying for the ultimate ... "when did we have a credit claim last?"

	September	October	November	Totals (3-months)
HARDWARE	10	10	20	40
SOFTWARE	32	28	26	86
HUMAN	14	6	13	33
TOTAL	56	44	59	159
NUMBER OF JOBS	32738	42526	49165	124429
% OF JOBS	0.17%	0.10%	0.12%	0.13%

GPJS/370 CREDIT REQUESTS

September, October and November of 1972

MORE STATISTICS ON NOVEMBER HIGH SPEED PROCESSING

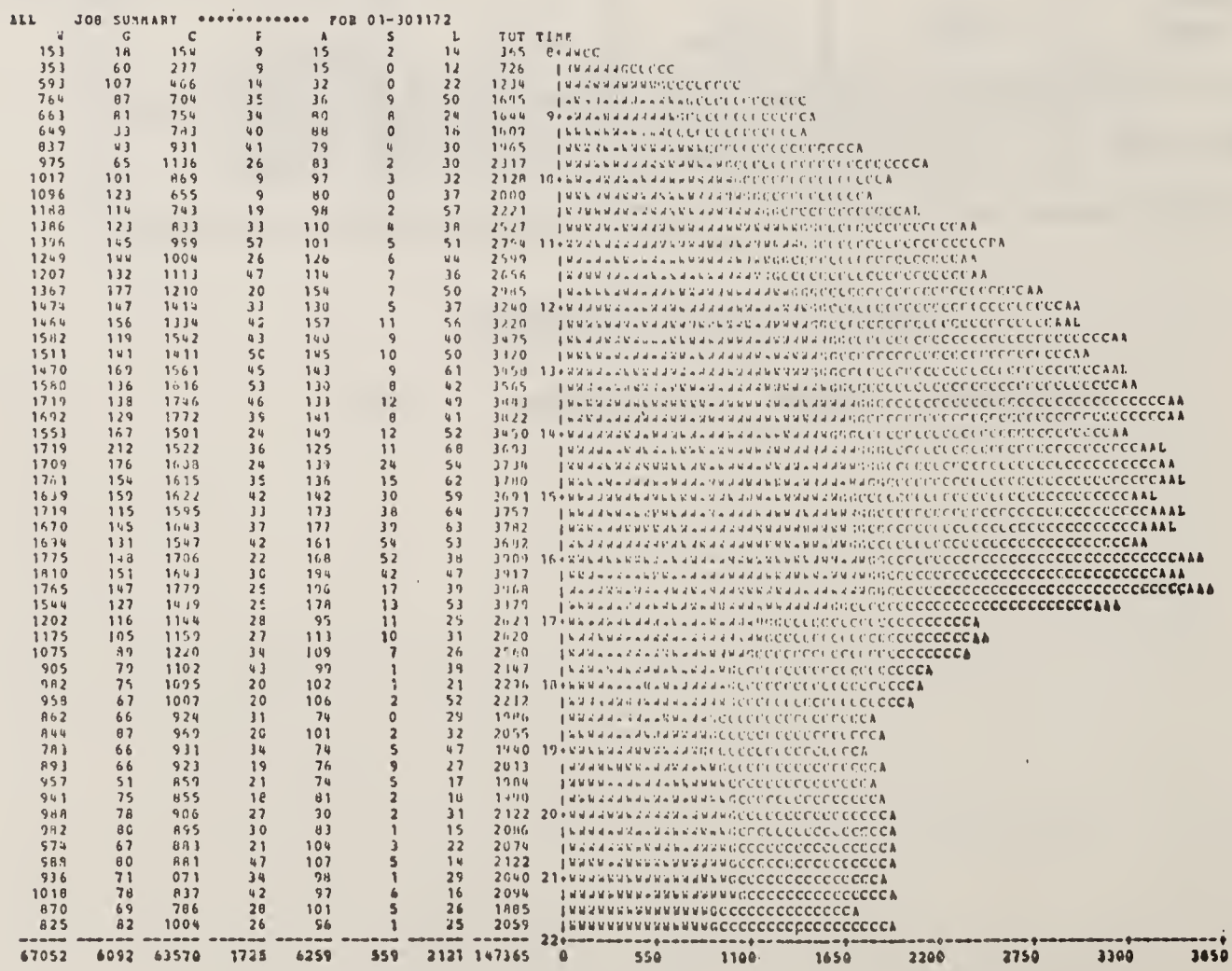
J. Lees

An earlier item in this newsletter has compared the November High Speed Job Stream workloads of 1971 and 1972. In detail for this year November yielded 147,899 jobs, an increase of 9.6% from October of this year. The Job Summary histogram illustrates the shape and mix of this load. The types of jobs are: WATFIV(W), ALGOL and SPITBOL(G), PL/C(C), ASMG(A), SIMON(S) and LIST(L).

Note that in October SPITBOL figures were combined with the LIST sub-processor. On November 1 a change in the accounting routines combined SPITBOL and ALGOL.

WATFIV and PL/C had very similar levels of use, contributing 45.5% and 43.1% respectively. A breakdown by terminal indicates that the Engineering Undergraduate Terminal carried 50.7% of the load while the Arts & Science Undergraduate Terminal supported 38.0%. Remote terminals carried the balance of 11.3%.

Of the 74,787 jobs run at EUT, 61.0% were WATFIV and 25.9% were PL/C. The processor usage was reversed at ASUT, where 23.8% were WATFIV and 67.5% were PL/C of the total 55,942 jobs. This heavy usage of PL/C at ASUT reflects the use of PL/C as a teaching language for first year Computer Science students.



SYSTEM STATUS BULLETINS ISSUED

J. Campbell

60:72:1 Changes to CALCOMP
61:72:1 Code Protection on S/370
62:72:1 Hours of Service -- Christmas Holiday

UPDATES ISSUED FOR USERBOOK SECTION 3

J. Campbell

Pages added, and/or replaced by updates:

November 1/72 --	3.6610	3.6612	3.6620-2	3.6623
	3.6630			
November 15/72 --	3.5	3.5010	3.5102-2	3.5105
	3.5167	3.5170	3.5220	3.5228
	3.5229	3.5280	3.5282-2	3.5285
	3.5290-2	3.5292	3.5298	3.5300
	3.5308-2	3.5400	3.5415	3.5414-2
November 16/72 --	3.2	3.2000	3.2020	3.2030
	3.2040	3.2050	3.2052	3.2062
	3.2065	3.2083	3.2100	
November 17/72 --	3.6310	3.6316-2	3.6316-3	3.6316-4
	3.6320-4	3.6320-8	3.6326-3	3.6328-1
	3.6334-2	3.6334-3		
November 21/72 --	3.7010	3.7100	3.7100-2	3.7115
	3.7170	3.7180	3.7300	3.7300-2
	3.7310	3.7340	3.7350	3.7399
December 4/72 --	3.2-2	Temporary Update		
	3.2-3	Temporary Update		

INTERACTIVE SYSTEMS RELIABILITY S. Goldfarb

The following table summarizes the time lost out of scheduled hours of production for the period November 1 through November 30, 1972. The total number of scheduled hours of operation during this period was 493. Table 1 shows the time lost due to late starts. Table 2 shows the time lost due to system failures for each of the systems: four unscheduled IPL's were required as a result of the system failures. The uptime for each of APL, ATS and CPS was 98.50%, 98.47% and 98.44% respectively. In addition to the scheduled hours of operation, APL, ATS and CPS were available during approximately 113 hours of unscheduled weekend time.

DATE	TIME UP			REASON
	APL	ATS	CPS	
Sat. Nov. 11	9:10	9:14	9:12	Memorex 1270 Maintenance
Mon. Nov. 13	12:15	12:16	12:18	Multiplexer and Memorex 1270 Failure (hardware)
Wed. Nov. 22	9:18	9:20	9:21	Memorex 1270 Maintenance
Time Lost (mins.)	223	230	231	

Table 1. Late Starts November 1 to November 30

DATE	DOWN TIME (mins.)			REASON
	APL	ATS	CPS	
Tues. Nov. 7	4			Operator Error
Tues. Nov. 7	10	11	13	*Channel Error (hardware)
Fri. Nov. 10	6	7	10	*Channel Error (hardware)
Thur. Nov. 23	14	15	17	*CPU Failure (hardware)
Fri. Nov. 24	6	9	11	*Storage Check (hardware)
Mon. Nov. 27	180	180	180	CPU Failure (hardware)
Totals	220	222	231	*Unscheduled IPL required

Table 2. System Failures November 1 to November 30

USERBOOK SECTION 4 S. Goldfarb

The Interactive Systems section of the new Computer Centre USERBOOK is now available. The price for this section is $0.25. Computer Centre authorization code holders may charge any number of copies of the USERBOOK, its sections, or its subsections against their account. Holders of the USERBOOK or its sections will be registered and will automatically receive revisions.

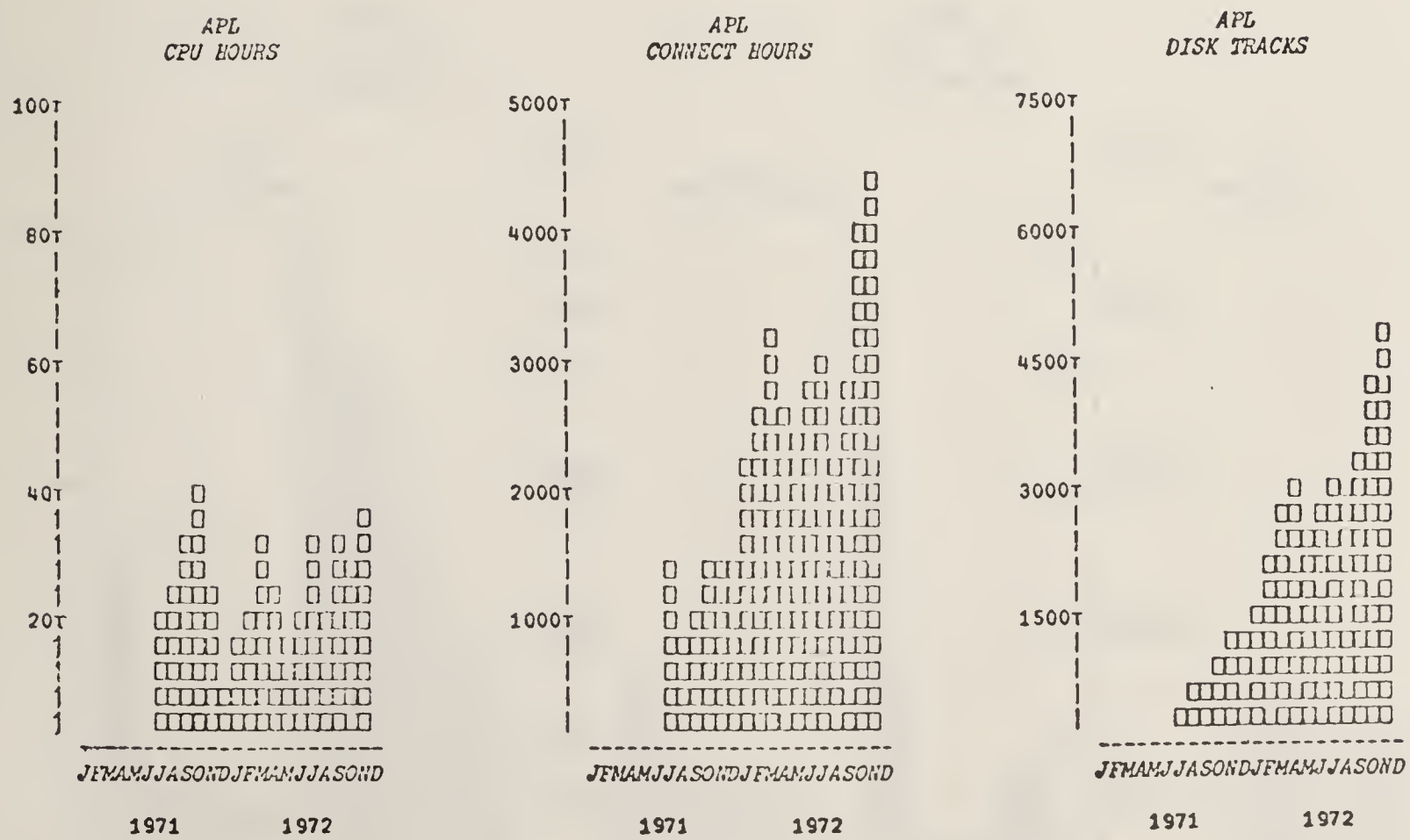
The USERBOOK is intended to become the prime source of information about the Computer Centre's services and all users are encouraged to obtain a copy of those sections of interest to themselves. For ordering copies of the USERBOOK sections, or for further information, please visit or call:

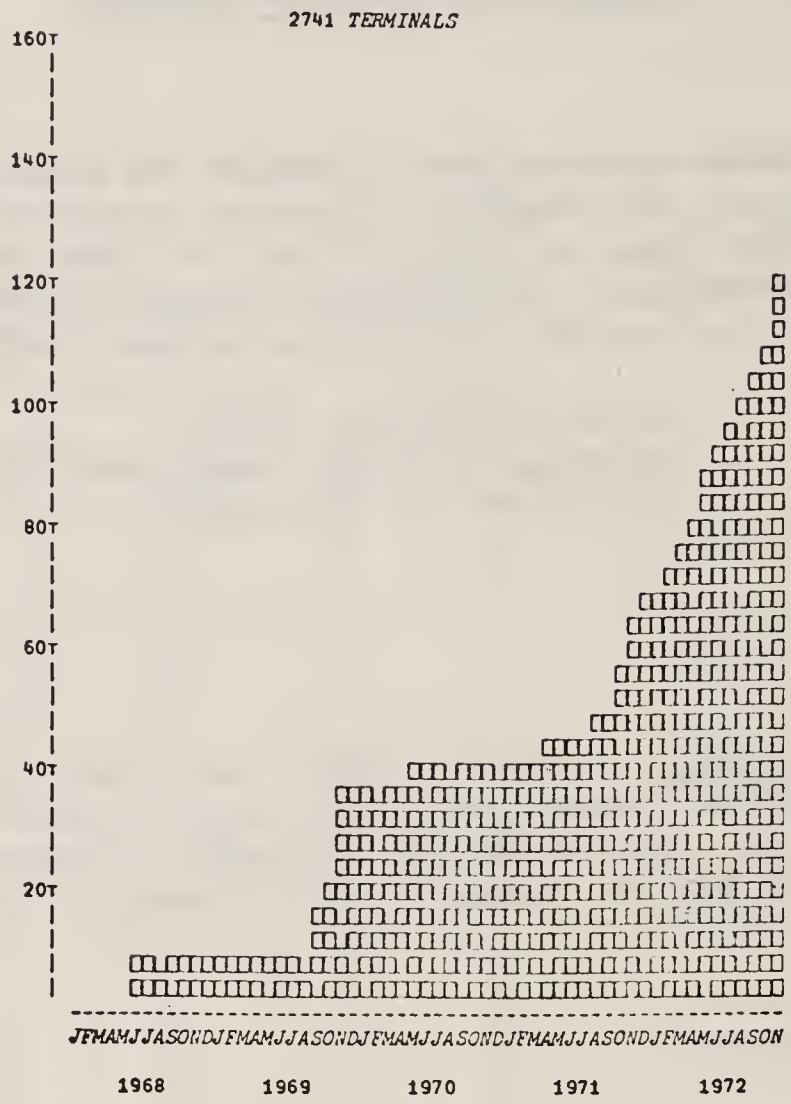
UTCC Information Office
10 King's College Road, Room 134
(928-4990 or 928-4991)

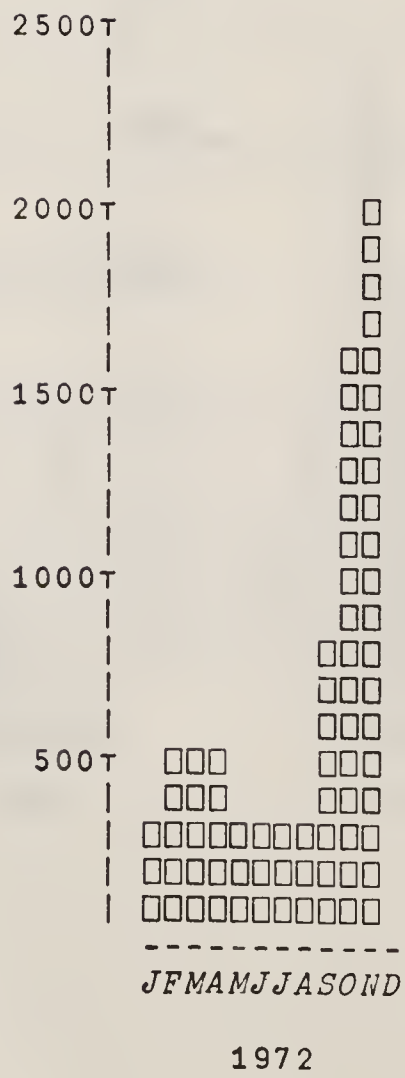
USAGE GRAPHS

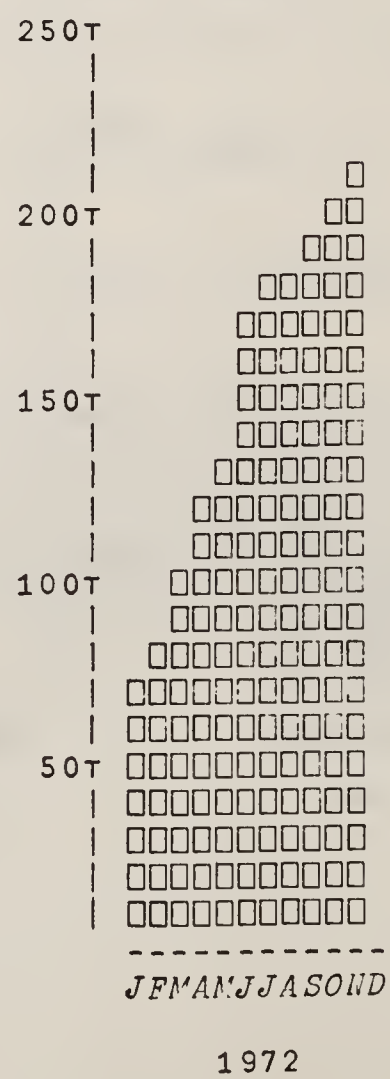
S. Goldfarb

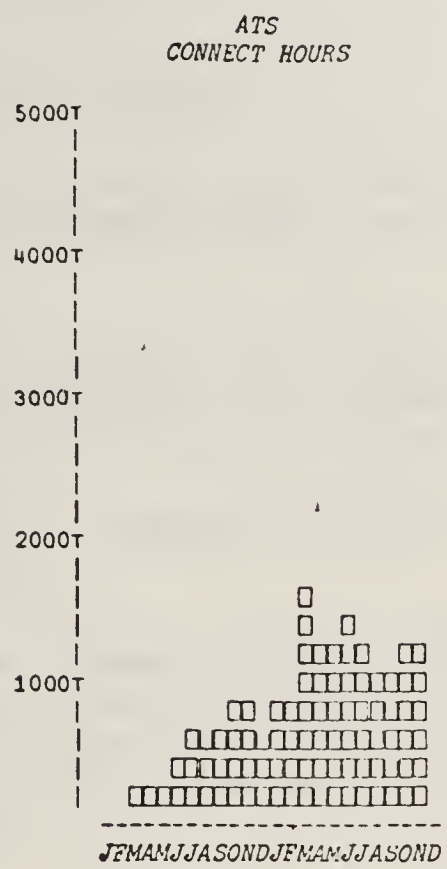
The following graphs illustrate the growth of activity on the Interactive Systems over the past several months. Also shown are the changes in the number of user accounts for APL and ATS and the number of 2741 terminals installed.

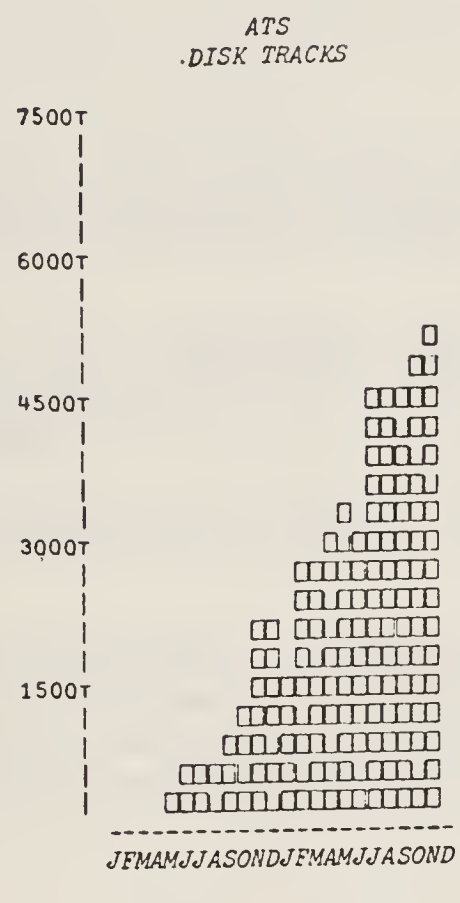


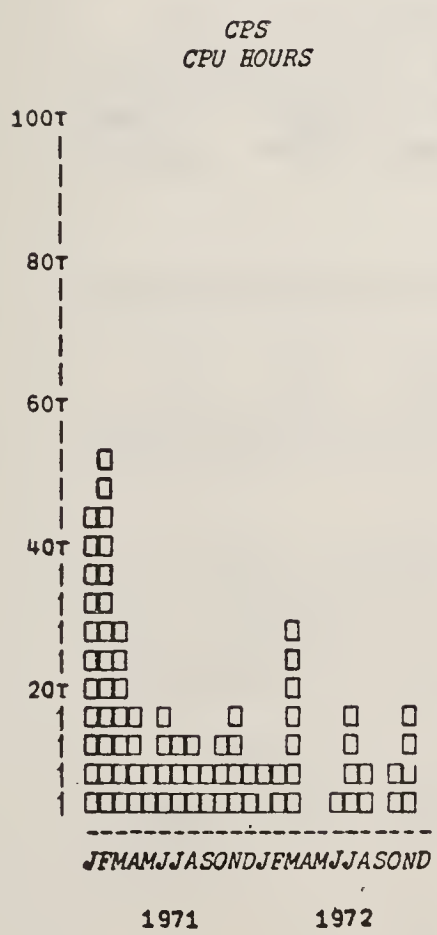

2741 TERMINALS
160T
140T
120T
100T
80T
60T
40T
20T
JFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMAMJJASON
1968
1969
1970
1971
1972

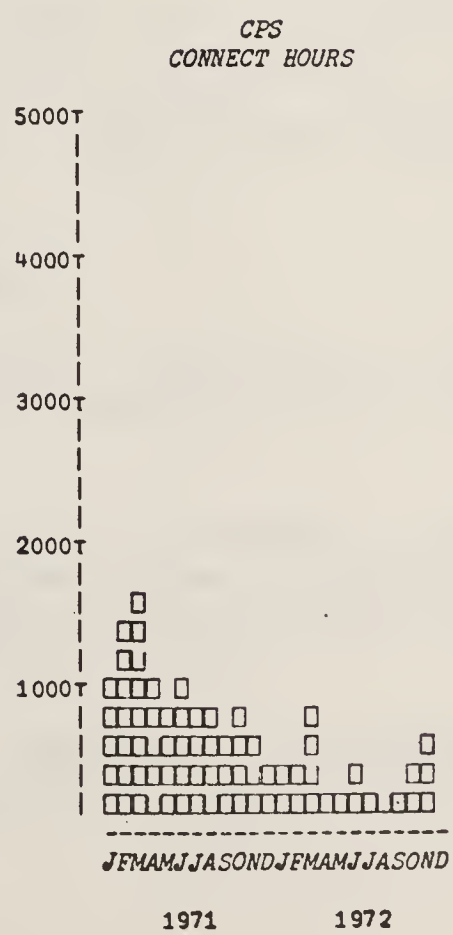

APL
NO. OF
ACCOUNTS
2500T
2000T
1500T
1000T
500T
JFMAMJJASOND
1972

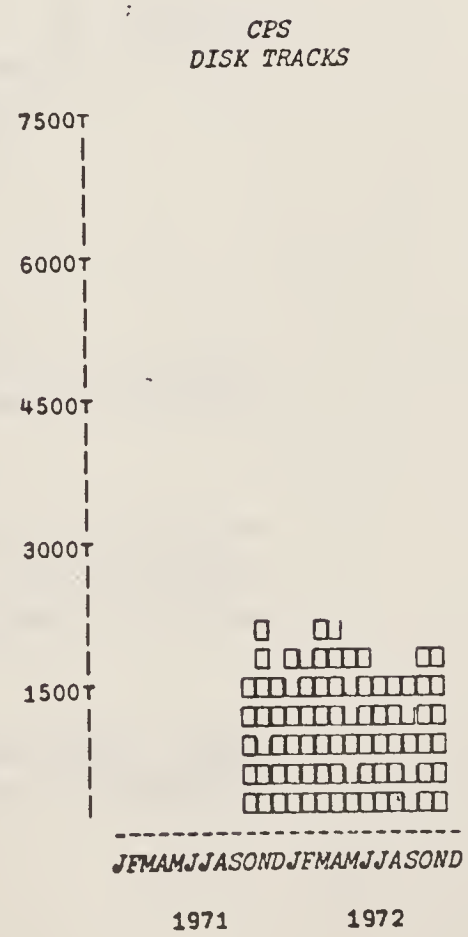

ATS
NO. OF
ACCOUNTS
250T
200T
150T
100T
50T
JFMAMJJASOND
1972


ATS
CONNECT HOURS
5000T
4000T
3000T
2000T
1000T
JFMAMJJASONDJFMAMJJASOND
1971
1972


ATS
DISK TRACKS
7500T
6000T
4500T
3000T
1500T
JFMAMJJASONDJFMAMJJASOND
1971
1972


CPS
CPU HOURS
100T
80T
60T
40T
20T
JFMAMJJASONDJFMAMJJASOND
1971
1972


CPS
CONNECT HOURS
5000T
4000T
3000T
2000T
1000T
JFMAMJJASONDJFMAMJJASOND
1971
1972


CPS
DISK TRACKS
7500T
6000T
4500T
3000T
1500T
JFMAMJJASONDJFMAMJJASOND
1971
1972

GENERAL NEWS

J. R. McBride

CRF Users' Meeting

The November CRF Users' Meeting was held in Room 2689, Sandford Fleming Labs., at 3:00 p.m. on Friday, November 24, 1972.

The topic that monopolized the discussion was the proposed merger of the Computer Research Facility and the University of Toronto Computer Centre.

J. R. McBride acted as chairman and answered users' questions.

The users present appeared favourable to the proposed merger on condition that CRF would continue to provide its present level of service. Mr. McBride reassured the users that no changes in service were being planned because of the merger.

CRF-UTCC Merger Committee

This committee is now at work investigating the proposed merger. All users who have comments or suggestions to make are invited to contact the members of the committee.

The committee members are: Professor J. R. Keffer (Department of Mechanical Engineering), Professor H. W. Smith (Department of Electrical Engineering), Dr. J. C. Wilson (UTCC) and J. R. McBride (CRF - Chairman).

Data Acquisition Summary

A new publication entitled, "A Summary of Data Acquisition Facilities Available at CRF", is now available from the CRF office.

This document gives an outline of existing facilities and indicates the proposed future facilities. A user survey is included so that interested readers can comment on the existing and proposed facilities.

Copies of the summary may be obtained from Miss Joyce King, Room 2740, Sandford Fleming Labs., (or telephone 6326).

Christmas and New Year Holidays

The CRF laboratory and offices will be closed on Friday, December 22, Monday, December 25 and Tuesday, December 26, 1972 for the Christmas holiday.

The laboratory will close at 8:00 p.m. on Thursday, December 21 and will reopen at 9:00 a.m. on Wednesday, December 27, 1972.

The CRF laboratory and offices will be closed on Monday, January 1, 1973 for the New Year holiday.

The laboratory will close at 8:00 p.m. on Friday, December 29 and will reopen at 9:00 a.m. on Tuesday, January 2, 1973.

The laboratory will be available to Grade A Operators during the holiday period.

Visitors To The CRF Laboratory

The month of November was a busy time for visitors to the CRF laboratory. On the 20th, 21st, 27th and 28th of November, four groups of UTCC staff visited the CRF laboratory. Approximately seventy UTCC staff took part in the visit.

On Saturday, November 25 and Saturday, December 2, two groups of about sixty high school students toured the laboratory as part of their visit to the University.

Other visitors between November 16 and December 7, 1972 were as follows: Mr. J. Dereguanceurt and Mr. Pat Haley, (Bell Northern Research, Ottawa), Professor B. Corbin, (Scarborough College), Professor Boulton with two groups of Electrical Engineering students, Eric Teichozz (Harvard University, Cambridge, Mass.), Professor P.A.V. Thomas (University of Windsor), Mr. N. Stewart, (Department d' Informatique, Universite de Montreal).

UTCC DIRECTORY

	ROOM	PHONE 928-
DIRECTOR		
John C. Wilson	SF105	6496
ASSISTANT DIRECTOR		
C. Alan Ford	SF105	2991
USER LIAISON OFFICER		
Bill Greene	SF128	2694
Information Office	SF134	4990 or 4991
ADMINISTRATION MANAGER		
Jerry Palter	SF131	8948
AUTHORIZATION CLERKS		
Nancy Pocock (S/370 + 7094)	SF115A	8702
Yvonne Davis (Interactive)	49 St.Geo	8703
S/370 SERVICES		
MANAGER		
Dave McNaughton	SF136	6281
INPUT/OUTPUT SUPERVISOR		
Derry Cox	SF112	7092
USER SERVICES SUPERVISOR		
Stan Yagi	SF112	7331
SYSTEMS SUPPORT SUPERVISOR		
Rein Mikkor	SF112	5058
PROGRAM ADVISORS	SF103	8599
INTERACTIVE TERMINAL SYSTEMS		
MANAGER		
Sam Goldfarb	49 St.Geo	3787
7094 SERVICES		
MANAGER		
Joyce Walton	BT1207	7094

JOB STATUS QUERIES:

SYSTEM/370	7373
7094	7094

INTERACTIVE TERMINAL SYSTEMS:

System Status	6234
APL	7200
ATS	7100
CPS	6200

CONVERSATIONAL REMOTE JOB ENTRY (CRJE)

2741: Tel: 7223 7381	7386
TTY:	7445

UTCC COMPUTER EQUIPMENT

(a) SYSTEM/370 MODEL 165

- located in SF 106/110/111
- provides General Purpose Job Stream, High Speed Job Stream and Conversational Remote Job Entry services
- 2048K bytes of core
- 1 drum
- 4 disk drives IBM (3330)
- 8 disk drives IBM (2314)
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 7 remote batch terminals
- 1 paper tape reader
- CALCOMP plotter (11" and 30")

- OS/MVT with HASP

(b) SYSTEM/360 MODEL 65

- located in Room 333 McLennan Physical Laboratories
- provides Interactive Systems Service
- 1536K bytes of core
- 16 disk drives (2314)
- 2 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 120 typewriter terminals

- OS/MVT with APL, ATS, and CPS

(c) 7094 II

- located in Room 1203 Burton Tower
- 32K words of core
- 1 disk
- 8 magnetic tape drives
- input/output via a 1401 computer

UNIVERSITY OF TORONTO
COMPUTER CENTRE,
TORONTO, CANADA.